

CLAIMS

What is claimed is:

1. A method comprising:
- receiving a request to download data into flash memory;
 - halting the downloading of the data into the flash memory until the flash memory is initialized, wherein the initialization includes storing pointers in a memory to different locations within the flash memory where the data is to be stored; and
 - storing the data into the flash memory based on the pointers stored in the memory.
2. The method of claim 1, wherein the initialization of the flash memory comprises:
- generating headers for the different locations within the flash memory where the data is to be stored; and
 - storing the headers at the different locations within the flash memory.
3. The method of claim 1, further comprising storing the data received from the download into a number of buffers prior to storing the data into the flash memory.
4. The method of claim 1, wherein the initialization of the flash memory comprises reclaiming space within the flash memory that is reclaimable for storage of data into the flash memory.

5. A method comprising:
- receiving a request from an external device to store data into a flash memory of a device, wherein the request includes the size of the data;
 - initializing the flash memory of the device prior to receiving the data, wherein the initializing comprises,

6 determining whether the size of free space within the flash memory is
7 greater than the size of the data;
8 upon determining that the size of the free space within the flash memory is
9 not greater than the size of the data, reclaiming space within the flash memory;
10 generating headers for each of a number of different locations within the
11 flash memory where the free space is located;
12 storing the headers into the number of different locations within the flash
13 memory; and
14 storing pointers, in a separate memory, to the number of different locations
15 within the flash memory where the free space is located;
16 transmitting a signal to the external device to transmit the data after the
17 initialization of the flash memory is completed;
18 receiving the data into a number of buffers within the device; and
19 storing the data within the number of buffers into the number of different
20 locations within the flash memory where the free space is located.

1 6. The method of claim 5, wherein the separate memory is a random access memory.

1 7. The method of claim 5, wherein the device is a cellular telephone and the external
2 device is a server coupled to a network and wherein the data is transmitted to the cellular
3 telephone through a wireless transmission link.

1 8. The method of claim 5, further comprising disabling interrupts within the device
2 when portions of the data are being written into the number of different locations in the
3 flash memory.

1 9. The method of claim 8, further comprising:

2 determining whether interrupts are pending in the device periodically during the
3 time the data is being written into the number of different locations in the flash memory;
4 and
5 periodically halting the writing of the data into the number of different locations
6 in the flash memory and servicing the interrupts that are pending in the device upon
7 determining that interrupts are pending.

1 10. An apparatus comprising:
2 a flash memory partitioned into blocks;
3 a random access memory coupled to the flash memory;
4 a write unit coupled to the flash memory and the random access memory, wherein
5 the write unit is to receive a request to download data into the flash memory and wherein
6 the write unit is to download the data into the flash memory; and
7 an initialize unit coupled to the flash memory, the random access memory and the
8 write unit, wherein the initialize unit is to store pointers, prior to downloading the data
9 into the flash memory, in the random access memory to a number of the blocks within the
10 flash memory that are free to store the data.

1 11. The apparatus of claim 10, wherein the initialize unit is to store headers at the
2 number of different blocks within the flash memory, prior to downloading the data into
3 the flash memory.

1 12. The apparatus of claim 10, wherein the initialize unit is to reclaim space, prior to
2 downloading the data into the flash memory, within flash memory that is reclaimable for
3 storage of the data into the flash memory upon determining that the size of free space
4 within the flash memory is less than the size of the data to be downloaded into the flash
5 memory.

1 13. The apparatus of claim 10, wherein the write unit is to store the data received from
2 the download into a number of buffers prior to storing the data into the flash memory.

1 14. A system comprising:
2 a server coupled to a network; and
3 a cellular telephone wirelessly coupled to the network, wherein the cellular
4 telephone comprises,
5 a flash memory partitioned into blocks;
6 a random access memory coupled to the flash memory;
7 a processor that is coupled to the flash memory and the random access
8 memory, the processor to execute a number of instructions, which when executed by the
9 processor causes the processor to,
10 receive a request, from the server, to download data into the flash
11 memory;
12 halt the downloading of the data into the flash memory until the
13 flash memory is initialized, wherein the initialization includes storing pointers in
14 the random access memory to a number of the blocks within the flash memory
15 where the data is to be stored; and
16 store the data into the flash memory based on the pointers stored in
17 the memory.

1 15. The system of claim 14, wherein the initialization of the flash memory comprises:
2 generating headers for the different locations within the flash memory where the
3 data is to be stored; and
4 storing the headers at the different locations within the flash memory.

1 16. The system of claim 1, further comprising storing the data received from the
2 download into a number of buffers prior to storing the data into the flash memory.

1 17. The system of claim 1, wherein the initialization of the flash memory comprises
2 reclaiming space within the flash memory that is reclaimable for storage of data into the
3 flash memory.

1 18. A machine-readable medium that provides instructions, which when executed by a
2 machine, causes the machine to perform operations comprising:
3 receiving a request to download data into flash memory;
4 halting the downloading of the data into the flash memory until the flash memory
5 is initialized, wherein the initialization includes storing pointers in a memory to different
6 locations within the flash memory where the data is to be stored; and
7 storing the data into the flash memory based on the pointers stored in the memory.

1 19. The machine-readable medium of claim 18, wherein the initialization of the flash
2 memory comprises:
3 generating headers for the different locations within the flash memory where the
4 data is to be stored; and
5 storing the headers at the different locations within the flash memory.

1 20. The machine-readable medium of claim 18, further comprising storing the data
2 received from the download into a number of buffers prior to storing the data into the
3 flash memory.

1 21. The machine-readable medium of claim 18, wherein the initialization of the flash
2 memory comprises reclaiming space within the flash memory that is reclaimable for
3 storage of data into the flash memory.

1 22. A machine-readable medium that provides instructions, which when executed by a
2 machine, causes the machine to perform operations comprising:

receiving a request from an external device to store data into a flash memory of a device, wherein the request includes the size of the data;

initializing the flash memory of the device prior to receiving the data, wherein the initializing comprises,

determining whether the size of free space within the flash memory is greater than the size of the data;

upon determining that the size of the free space within the flash memory is not greater than the size of the data, reclaiming space within the flash memory;

generating headers for each of a number of different locations within the flash memory where the free space is located;

storing the headers into the number of different locations within the flash memory; and

storing pointers, in a separate memory, to the number of different locations within the flash memory where the free space is located;

transmitting a signal to the external device to transmit the data after the initialization of the flash memory is completed;

receiving the data into a number of buffers within the device; and

storing the data within the number of buffers into the number of different locations within the flash memory where the free space is located.

23. The machine-readable medium of claim 22, wherein the separate memory is a random access memory.

24. The machine-readable medium of claim 22, wherein the device is a cellular telephone and the external device is a server coupled to a network and wherein the data is transmitted to the cellular telephone through a wireless transmission link.

1 25. The machine-readable medium of claim 22, further comprising disabling
2 interrupts within the device when portions of the data are being written into the number of
3 different locations in the flash memory.

1 26. The machine-readable medium of claim 25, further comprising:
2 determining whether interrupts are pending in the device periodically during the
3 time the data is being written into the number of different locations in the flash memory;
4 and
5 periodically halting the writing of the data into the number of different locations
6 in the flash memory and servicing the interrupts that are pending in the device upon
7 determining that interrupts are pending.